Calais Lakes and Ponds WORKING GROUP
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WHAT WILL THE FUTURE HOLD?

Will Calais be Home to the Animals and Plants that Live Here Today?

by Candice Shaffer, Calais, VT

One of the values shared by many who live in Calais is the love of our "natural heritage," made up of diverse life forms of plants and animals. This biodiversity is our heritage and the balance that sustains life.[1] In a 2001 public survey by VT Fish and Wildlife, "Vermont ranked first in the country in the percentage of residents that actively observed wildlife (60%)". The same survey showed that 97% of Vermonters share the opinion that ecologically important habitats and lands in Vermont should be protected. Approximately 307,000 non-residents participate in wildlife observation, fishing and hunting providing the state with $386 million dollars in that year. Whether it is a simple love of the wild or the importance of these resources to one's livelihood, Vermont residents value the wilderness and the wildlife that live nearby.

Vermont is seeing increased pressures for development which has the potential to have a significant impact on our wild areas. Conservation of Calais' natural heritage is a topic worthy of discussion in the community. The decisions we make now as a community will reach beyond our lifetimes to our descendants and offer the possibility to preserve the best of our wild habitat, its animals and plants.

You might ask — what is Calais doing in response to this pressing need? Currently, the Calais Conservation Commission (CCC) and Planning Commission (CPC) are working together to revise the Town Plan to reflect ways to enhance stewardship of our natural resources. The CCC is performing inventories of our natural resource elements so that we will better understand them and where they live. In recent years, an inventory of vernal pools within Calais was undertaken and the state is continuing this effort. Currently an effort is underway to inventory our Contiguous Habitats and Connecting Habitats. These are critical for the future of wildlife in Calais.

What are Contiguous Habitat Blocks and Connecting Habitats?

Contiguous Habitat Blocks (CHBs) are natural areas, such as forests, wetlands, cliffs and ponds, that are mostly free of roads and other forms of development.

The interiors of CHBs are generally 300 feet from the edge of adjacent development. They provide secure and important habitat for many species of wildlife. For some species, which are sensitive to human activities, such as bobcats, CHBs provide the space and privacy essential to them. For others, such as northern goshawks and scarlet tanagers, CHBs provide the forest interior habitat which they require. Within large CHBs, wide-ranging species of wildlife, such as black bear and fisher, have access to important feeding, breeding, and resting habitat without the need to cross roads. Natural ecological processes, such as water movement, soil development, succession and evolution, continue mostly unhindered therein. CHBs are important to the forestry industry and provide excellent opportunities for sustainable extraction of forest products while at the same time maintaining a home — food and shelter — for wildlife.

Connecting Habitat (Corridors) are the links — the smaller parcels of land — that connect contiguous habitat blocks (CHBs). Examples of connecting habitat are riparian habitat along streams and rivers, smaller areas of forest or wetlands, and locations where wildlife are best able to cross roads. These corridors allow movement, migration and dispersal of animals and plants so that the individual CHBs do not become isolated islands. Areas, far larger than the individual CHBs which currently exist in Calais, are needed for the survival of many animals. An interconnected network of CHBs allows plant and animal species to respond to continually changing environmental conditions, such as climate change. These corridors, because of their small size and their importance to the animals that use them, are particularly important to identify and maintain. The map on page 3 of the insert illustrates these corridors.

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Northern River Otters (Lontra canadensis)

Future *continued from page 1*

Connecting habitat allows plants and animals to move freely across their range for all aspects of their habitat needs and allows them to colonize new habitats in response to changing environmental conditions. This function is equally important for wide-ranging animals, such as bobcat and bear; animals needing a great deal of space for their daily needs, such as otter and barred owls; and for some animals that have relatively small ranges but very specific movement requirements, such as spotted salamanders which annually migrate to vernal pools to breed.

The natural resources of Calais are part of a much larger network of complex ecosystems in Vermont, North America and the world. Many migratory species return to the location where they were born to breed the next generation. If their first home was Calais, then they will return here to breed their own offspring and the habitat of Calais becomes critical to their survival. For example, Bob-O-Links that arrive here each spring are returning from South America after traveling 13,000 miles using the stars to navigate. The meadows, where they hope to successfully breed and fledge young, provide the habitat to continue the cycle of life, which has been repeated for ages.

Other animals may spend their whole lives in Vermont, but they depend on the connecting habitat contained in Calais to provide them with a domain that is sufficiently large for them to find food and shelter. Some creatures reside here; some are passing through. Calais contains important resources which are critical to the existence of many animals and plants. Their future in our community depends on protecting essential habitat and corridors.

Citizens of Calais have an opportunity to participate in this timely effort through community-based planning for biodiversity. There is much that needs to be done as effectively and quickly as possible to identify our remaining natural resources, prioritize and conserve them before they are lost. Through educational offerings, current use programs and conservation incentives we hope to inspire you to be aware of the natural resources you may be holding on your land and to be stewards of them for the future.

If you are inspired to volunteer your time in this effort or have questions about the work the Conservation Commission is doing, please contact commission member, Candice Shaffer at 456-7047 or monalisa@ezcloud.com or come to one of our monthly meetings the first Wednesday of each month at 7p.m. at the Town Clerk's Office. We currently have two positions open on the commission and welcome you to consider joining us in this exciting and rewarding work. If you are interested please contact Candice Shaffer.

1 For more information on biodiversity contact the EOWilson Biodiversity Organization at www.eowilson.org

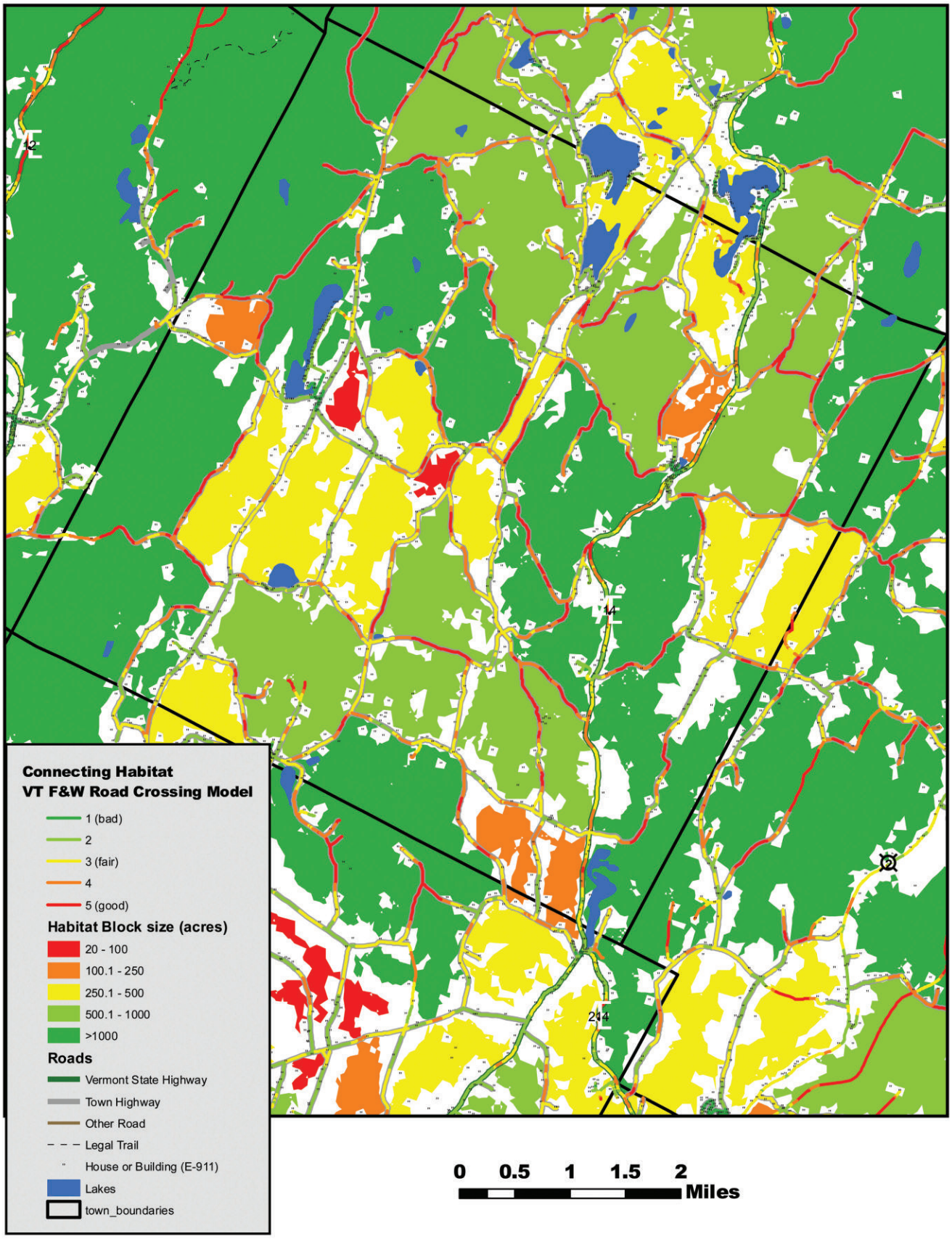
This Newsletter is Dedicated in Memorium to

Charles Woodard

The Lakes and Ponds Working Group originated through the efforts of Charles Woodard. After retiring from Goddard College he drew the community to together through volunteer participation in watershed surveys of the lakes and ponds of Calais. These learning experiences led to a greater consciousness of the value of stewarding some of Calais' greatest natural treasures.

We greatly appreciate his efforts and the pleasure of spending time with him on the waters.

False Solomon's Seal (Smilacina racemosa)



This map is provided courtesy of the Vermont Fish and Wildlife Department.

CLEAN HOUSE AND CLEAN NATURAL WATERS

Living on the Shore of North Montpelier Pond

When we received our first copy of the Calais Lakes & Ponds Working Group newsletter in 2001, we found it contained helpful information, people and organizations to contact if we needed help with home or land. It felt good to know we are part of a larger community, that many of our neighbors are experiencing the same joy and concerns of living on the banks of a pond, lake or stream. We were encouraged to share some of our experiences.

Like many of us living here, we are far from wealthy and learn to "make due" on many fronts. What would happen if something big like our septic system failed? That and other realities set in when we purchased our 120-year-old house on North Montpelier pond many years ago. Living close to a pond made it possible to be close to the natural world we love, but we quickly learned that it required additional responsibility. Our immediate attention was focused on things such as driveway runoff. Redirecting that to naturally filtering earth, away from water sources and plumbing, was something we could take care of ourselves.

We were lucky, essential things, like the septic, had been recently installed and we wanted to help it work correctly. We encouraged habits that have enhanced the quality of our life, maximized the number of years between major repairs and regulated our impact on the pond. Good habits are just as easy to maintain as bad ones — they become automatic.

One of our goals is to tax the septic system, and thereby the impact on the pond, as little as possible: We avoid putting grease down the kitchen drain, especially from meat. Cooking oils and grease can cause the inlet drains to block and are difficult to degrade. Certain chemicals may damage the working of a septic tank, especially pesticides, herbicides, bleaches and lye or any inorganic materials such as paints or solvents. Who needs bleach when you have vinegar, and it is so versatile! Vegetable matter from food preparation is composted. The use of garbage disposers for disposal of waste food can cause rapid overload of a septic system and early failure. Composting does not really need complicated, expensive equipment or lots of space, though it is best to have an unenclosed compost pile away from the house so as not to invite four-footed friends from moving in. We introduce only approved organic bacteria into the system from time to time. With the exception of the toilet, gray water only goes down the drains!

Gray water does require a little homework. Fortunately, most dish and laundry soap producers are careful nowadays. But soaps vary in "good" or "bad" ingredients. Shampoos also are a challenge: technically gray water, the perfumes, artificial colors etc. are not good on a regular basis. I also tend to vary products to cut down chemical build-up, though I would appreciate feedback about that strategy. We replace worn out pipes as needed and pump our septic systems on a regular basis to be sure that it does not overflow. We pay attention to unusual noises that may indicate a problem — "we" being my husband. He is the "local expert" for strange noises in our house. Most families have their handy woman or man who also knows when it is time to call in the professional.

Washing machines, bathtubs and dishwashers generate the single largest influx of gray water. We do our laundry at a Laundromat. Now, I'm not suggesting that everyone should throw out their washing machines; on the contrary. That was a compromise we were willing to make based on our lifestyle with the health of the pond in mind. But you might want to consider going to the Laundromat when you have a mountain of laundry after holidays with family and guests. Use eco-friendly detergents and use as little as possible. This is often far less than the manufacturer recommends and less is good for your pocketbook as well as the pond.

Automatic dishwasher detergents will no longer contribute to algae problems in Vermont lakes and rivers. Beginning on July 1, 2010 a new Vermont law (Title 10 1381-1384) prohibits the sale of household dishwasher detergents containing more than a trace amount of phosphorus. When phosphorus enters our lakes and streams it acts as a fertilizer, feeding plant and algae growth. In 1978 Vermont banned phosphorus from laundry and dish detergents, but this ban excluded

continued on opposite side

Clean House, *continued*

dishwasher detergents. The original ban worked effectively. Today, wastewater discharges are down by more than 90% from their historic levels. Dishwater detergent was one of the remaining culprits that the state has now eliminated with its new law. The shelves of the grocery store will continue to contain dishwasher detergent with phosphorus until existing inventories are depleted. Read the labels and get phosphorus-free dishwasher detergent as soon as possible.

In fact, label reading is a practice that we have adopted before we purchase any cleaning product. There are still numerous cleaners with high concentrations of phosphorus on the market. They often appear in the hardware or automotive sections of stores and are advertised for those seriously dirty jobs. It is amazing how well the good old-fashioned cleaners — ammonia and vinegar and hot water — work.

Still, should your septic system need emergency attention, it is good to know that there are outside sources to go to for advice and assistance, reliable local private businesses as well as state agencies:

- VT Dept of Housing & Community Affairs
  www.dhca.state.vt.us/housing
- VT Dept of Environmental Conservation,
  Wastewater Management Div., Waterbury
  www.anr.state.vt.us

Susan McKenney

U-32 STUDENTS LED BY VERMONT YOUTH CONSERVATION CORPS TACKLE INVASIVE REEDS IN CURTIS POND

The Vermont Youth Conservation Corps (VYCC) generously donated its time to protect Curtis Pond from being overtaken by an aggressive, invasive plant, known as Common Reed *(Phragmites australis)*. On October 8, 2010 a group of students from U-32 High School working under the leadership of the VYCC gathered at the southern end of Curtis Pond to remove a small colony of the reed. Invasive species are popping up in many locations throughout Vermont. The main defense is to identify them early and remove them before they overtake native species and become impossible to eliminate. Common reed in Curtis Pond was threatening to colonize an entire cove. Depending on the weather and conditions in the pond this could happen in a matter of a few years. In the mid-Atlantic states phragmites has overridden thousands of acres of marshes and wetlands. With the warming of the climate phragmites is becoming more and more common in Vermont.

We deeply appreciate the hard work of the students and the generous contribution of the VYCC for their help in preserving the open waters of Curtis Pond. Also, many thanks to the Maple Corner Store and Dillon Burns for donating pizza to sustain the crew.

Calais Lakes and Ponds WORKING GROUP

For volunteering or further information, contact:

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